## Message

From: Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]

**Sent**: 3/22/2019 10:20:28 AM

**To**: Hogue, Cheryl [C\_Hogue@acs.org]

Subject: RE: PFO4DA, PFO5DoDA, and Hydro-EVE acid

I would expect to get the galleys back to them by early next week. Then it is on them. Perhaps 2 weeks or so.

Mark

From: Hogue, Cheryl <C\_Hogue@acs.org> Sent: Thursday, March 21, 2019 4:02 PM To: Strynar, Mark <Strynar.Mark@epa.gov>

Subject: RE: PFO4DA, PFO5DoDA, and Hydro-EVE acid

Thanks, Mark! This was exactly what I was looking for. Any idea when that ES&T paper is scheduled to come out? And congrats on that! -- Cheryl

From: Strynar, Mark <<u>Strynar.Mark@epa.gov</u>>
Sent: Thursday, March 21, 2019 2:26 PM
To: Hogue, Cheryl <<u>C</u>\_Hogue@acs.org>

Subject: [EXT] RE: PFO4DA, PFO5DoDA, and Hydro-EVE acid

[Actual Sender is Strynar.Mark@epa.gov]

Hi Cheryl.

The short answer is we found PFO4DA and PFO5DoDA in the river before the ES&T Strynar et al., 2015 paper and the Hydro-EVE as the paper was in galley proof stage. We did not want to add it at that late time post review so it never made it into the paper. In the Sun et al., 2016 paper we also did not measure for it but we know it has been seen in the river and samples with time. You should know James McCord and I have a paper in galley proof stage at ES&T that will show and discuss this PFAS and other.

Where do these chemicals come from in the industrial process I cant answer. We do know the emanate from processes on the Chemours/Dupont facility. I can guess during the generation of either HFPO-DA or some other polyfluoro ether compound these are side products.

We have seen Hydro-EVE in water samples and James paper will show this. I also presented this at ACS last summer in a slide deck. On slide 43 Hydro-EVE is the chemical on the bottom with the mass 426.9657. You should note Hydro-EVE is what Chemours calls it and it is really similar to Nafion BP2 except the end is a carboxylic acid rather than a sulfonate.

See attached.

Mark

From: Hogue, Cheryl < C Hogue@acs.org>
Sent: Wednesday, March 20, 2019 12:00 PM
To: Strynar, Mark < Strynar.Mark@epa.gov>
Subject: PFO4DA, PFO5DoDA, and Hydro-EVE acid

Hi Mark -

I'm doing a story on the results of Dr. Jane Hoppin's GenX exposure study. I'm trying to track down the process(es) that produce PFO4DA, PFO5DoDA, and Hydro-EVE acid.

I know that in your nontargeted analysis published in ES&T in 2015, your team found the polyethers PFO4DA and PFO5DoDA. Did you determine what industrial processes these are connected to?

In your work on the Cape Fear River, have you found Hydro-EVE acid, CAS 773804-62-9? Can you offer an insights on this chemical?

Thanks so much!

Cheryl

Cheryl Hogue Senior correspondent Chemical & Engineering News 1155 16<sup>th</sup> St. NW Washington, DC 20036 USA

Phone +1 202 872 4551 Twitter: CHogue